

B¹
concl'd.

biological material [so as to] and enable the release of at least a part of said natural product;

[:]

intermittently applying reduced pressure within said enclosure during [said step for] the application of microwave[s in order] radiation to further the splitting up of the cellular structure[s] of said biological material induced by [the] application of the microwave[s] radiation;

heating said enclosure during [at least the essential part of said step for the] at least a portion of the microwave radiation application [of microwaves, in order] to compensate for the drop in temperature resulting from [the] evaporation of water from the biological material, wherein [making] applying microwave radiation to said biological material [undergo microwave irradiation], intermittently applying reduced pressure, and heating said enclosure causes hydro-distillation of [a] the natural product by conveying the natural product in water vapor coming from the biological material; and separating a residual biological material from the natural product.

B²

3. (Twice Amended) Method according to claim 1, wherein [said step for the separation of] separating the residual biological material from the extracted natural product comprises:

refrigerating the water vapor containing said extracted natural product;
decanting the liquid mixture resulting from such refrigeration; and
separating said extracted natural product and the water resulting from such a decantation.

B³
concl'd.

8. (Twice Amended) Method according to claim 1, [wherein said step of microwave irradiation is conducted under the] the method further comprising mechanically stirring [of] said biological material during application of the microwave radiation.

B3
concl'd. 7. (Twice Amended) Apparatus for the implementation of claim 1, the apparatus comprising:
an enclosure [provided with means to generate microwaves within said enclosure
and] having a thermostat-controlled double wall;
means to generate microwave radiation within said enclosure;
heating means enabling the temperature of said thermostat-controlled double wall to
be regulated;
means enabling the pressure inside said enclosure to be reduced; and
means to recover the extract when [it] the extract comes out of said enclosure.

B4 16.¹³ (Amended) The method of claim ~~15~~¹², [wherein] the method further comprising injecting at least
a portion of the water resulting from recantation [is injected] back into the biological material.

✓
Additionally, please insert new claims 18-32 as follows:

~~18.9~~ The method of claim 1 wherein the biological material consists essentially of plant
material.--

B5
concl'd. ~~19~~¹⁰ The method of claim ~~1~~¹ wherein the extracted natural product consists essentially of
essential oils, the essential oils essentially insoluble in water.--

~~20~~ A method of separating a natural product from a biological material, the method
comprising:

placing the biological material in an enclosure, the biological material containing
water, the enclosure essentially free of liquid water other than the water
contained in the biological material, and the enclosure free of organic solvent;
releasing at least part of the natural product from the biological material by applying
microwave radiation to the biological material, the microwave radiation
effective to evaporate at least part of the water contained in the biological

Sub
C3

material to form water vapor and the microwave radiation effective to split the cellular structure of the biological material; hydrodistilling the natural product by conveying the natural product and the water vapor coming from the biological material as an azeotropic mixture; and separating the natural product from the azeotropic mixture.--

B5
CONT'D.
Sub
C3
cont.
--21.
16
material.--

The method of claim 20 wherein the biological material consists essentially of plant material.--

--22.

The method of claim 20, the method further comprising: intermittently applying reduced pressure within the enclosure during the application of microwave radiation to further split the cellular structure of the biological material induced by application of the microwave radiation.--

--23.

The method of claim 22, wherein intermittently applying reduced pressure comprises subjecting an interior of the enclosure to a pressure-reduction cycle.--

--24.
18

The method of claim 20, the method further comprising: heating the enclosure during at least a portion of the microwave radiation application to compensate for a drop in temperature resulting from evaporation of water from the biological material.--

--25.
19

The method of claim 24 wherein said heating step is conducted at a temperature lower than 100°C.--

--26.
20

The method of claim 20, wherein separating the natural product from the azeotropic mixture comprises:

refrigerating the azeotropic mixture to form a liquid mixture, the liquid mixture comprising the natural product; and separating the natural product from the liquid mixture.--

21
20
27
The method of claim 20 wherein the liquid mixture further comprises condensed water vapor, the method further comprising:

separating the condensed water vapor from the liquid mixture; and injecting at least some of the condensed water vapor that is separated from the liquid mixture into the enclosure to supplement hydrodistillation of the natural product.--

22
28
15
The method of claim 20, the method further comprising stirring the biological material during application of the microwave radiation.--

23
29
A method of separating a natural product from a biological material, the method comprising:

placing the biological material in an enclosure, the biological material containing water;

releasing at least part of the natural product from the biological material by applying microwave radiation to the biological material, the microwave radiation effective to evaporate at least part of the water contained in the biological material to form water vapor and thereby split the cellular structures of the biological material;

intermittently applying reduced pressure within the enclosure during the application of microwave radiation to further split the cellular structure of the biological material induced by application of the microwave radiation.--

conveying the natural product and the water vapor coming from the biological material as an azeotropic mixture; and
separating the natural product from the azeotropic mixture.--

B5
CONC 10.
~~--30.~~ ²⁴ The method of claim ²³ ~~29~~ wherein the biological material consists essentially of plant material.--

~~--31.~~ ²⁵ A method of separating a natural product from a biological material, the method comprising:

placing the biological material in an enclosure, the biological material containing water;

releasing at least part of the natural product from the biological material by applying microwave radiation to the biological material, the microwave radiation effective to evaporate at least part of the water contained in the biological material to form water vapor and thereby split the cellular structure of the biological material;

heating the enclosure during at least a portion of the microwave radiation application to compensate for a drop in temperature resulting from evaporation of water from the biological material;

conveying the natural product and the water vapor coming from the biological material as an azeotropic mixture; and
separating the natural product from the azeotropic mixture.--

~~--32.~~ ²⁶ The method of claim ²⁵ ~~29~~ wherein the biological material consists essentially of plant material.
